

A Revision of the Japanese Species of the Genus *Dryopomorphus* (Coleoptera, Elmidae)

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Abstract The Japanese species of the genus *Dryopomorphus* are revised. Four species are recognized. Two of them, *D. amami* sp. nov. and *D. yaku* sp. nov., are new to science. All the four species are described with keys and illustrations. The larvae of *D. extraneus*, *D. nakanei* and *D. amami* sp. nov. are also described here.

Introduction

The genus *Dryopomorphus* consists of medium-sized elmid beetles, and has some very remarkable characteristics. This genus is considered to be one of the most primitive genera of the family Elmidae (HINTON, 1971). Five species of the genus have hitherto been described from Japan, Malaysia, and Thailand, and some undescribed species have been collected from China (KODADA, 1993 b; JÄCH & KODADA, 1995).

In this paper, we review the Japanese species of the genus *Dryopomorphus*, with the descriptions and redescriptions of all the species and the larval stage of three species.

Materials and Methods

Methods. The general observation and dissection were made under a stereoscopic microscope. Microstructures were observed under a microscope on the dissected part mounted on hollow slides with pure glycerine. After the observation, the dissected parts were mounted on slides with Euparal or Canada balsam.

Terminology. The terminology refers generally to KUKALOVÁ-PECK & LAWRENCE (1993) for the hind wing venation, and BROWN (1991) for the larva.

Abbreviations for measurements. PL—length of pronotum; PW—width of pronotum; EL—length of elytra; EW—width of elytra; TL—total length (PL plus EL).

The average is given in parenthesis after the range.

Type depositories. The holotypes and some paratypes designated in this paper will be preserved in the Entomological Laboratory, Faculty of Agriculture, Ehime University, Matsuyama (EUM), and the other paratypes in the National Science Museum, Tokyo (NSMT), Naturhistrisches Museum, Wien (NMW) and the National Museum of Natural Science, Taichung (NMNS).

Systematics

Genus *Dryopomorphus* HINTON

[Japanese name: Hababiro-doromushi Zoku]

Dryopomorphus HINTON, 1936, 165. —— BOLLOW, 1938, 174. —— SATŌ & GOTŌ, 1967, 69. —— BROWN, 1981, 77 [key].

Type species: *Dryopomorphus extraneus* HINTON, 1936 (by original designation).

Adult. Body oblong, well convex, closely covered with dense pubescence throughout. Head almost concealed under pronotum; eyes widely separated. Antennae 11-segmented; scape and pedicel stout and longer than segments III–XI taken together. Labrum transverse, densely pubescent on dorsal surface, gently arcuate in front margin, with a pair of short apodemes protruding from postero-lateral corners; epipharynx closely covered with long setae. Maxillary palpi 4-segmented; segments I–III provided with dense pubescence; segment IV without pubescence and longer than I–III taken together. Pronotum a little narrower than elytra, with sides gently rounded apicad; front angles a little prominent with dully rounded corners; disc provided with sublateral sulci which are traced in basal 1/6–1/2. Prosternal process broad, protuberant at apex. Hind wing developed. Scutellum visible from above, moderate in size, subtriangular, finely punctate, slightly convex. Elytra provided with distinct punctate striae; intervals well convex. Abdominal sternite I bearing a pair of distinct longitudinal carinae at the middle, which are running for the full length; a pair of ovoid cavities large and deep, located on each side of each carina and surrounded with long setae extended across openings. Sternite IX oblong, lightly sclerotized, bearing short setae in apical part. Tergite IX lightly sclerotized, T-shaped, bearing short setae along apical margin. Legs short; tibiae penicillate; claws small and simple. Male genitalia simple trilobe type; median lobe longer than lateral lobes. Sexual dimorphism indistinct.

Larvae. Body elongate, gently tapered posteriad, convex above; ventral surface flat. Coloration of body yellowish brown to brown. Tubular spiracular gills present on mesothorax and abdominal segments I–VIII in mature larvae. Head visible from above, with short front tooth. Three stemmata on each side of head, non-melanized. Antennae 3-segmented. Labrum transverse, widely covered with frons of basal part, frequently invisible in dorsal aspect, bearing pectinate setae straightly on dorsal surface; front margin arcuate. Mandibles subtriangular, provided with three apical teeth and with a pair of long and pectinate setae. Gula well developed. Thoraces and abdomen rela-

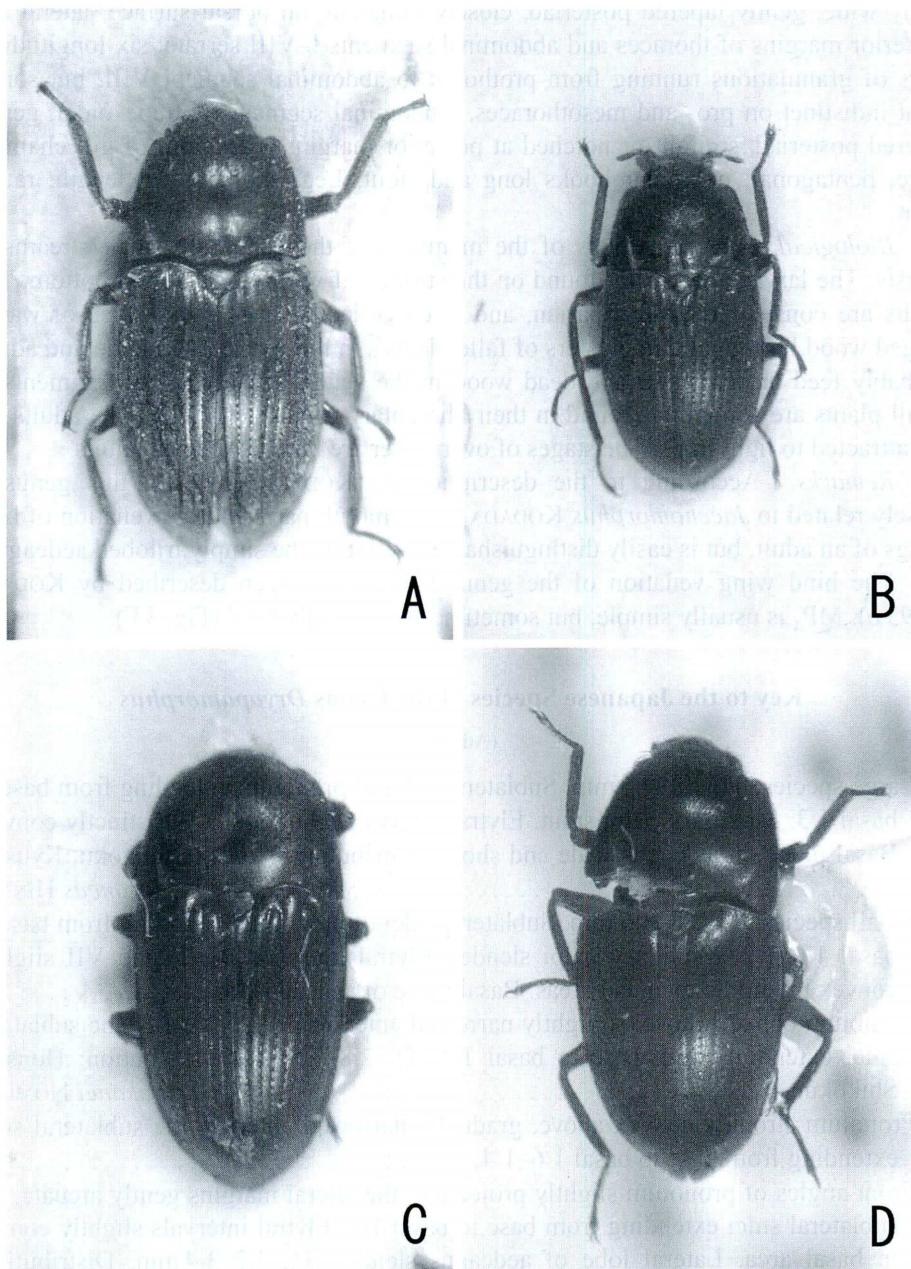


Fig. 1. Habitus of Japanese *Dryopomorphus* species. — A, D. *extraneus* HINTON; B, D. *nakanei* NOMURA; C, D. *amami* sp. nov., holotype, male; D, D. *yaku* sp. nov., holotype, male.

tively wide, gently tapered posteriad, closely granulate on dorsal surface, lateral and posterior margins of thoraces and abdominal segments I–VIII serrate; six longitudinal rows of granulations running from prothorax to abdominal segment VIII, but somewhat indistinct on pro- and mesothoraces. Abdominal segment IX trapezoidal, gently tapered posteriad, straight or notched at posterior margin; operculum of gill chamber large, pentagonal; opercular hooks long and stout. Legs moderate in length, rather stout.

Biological notes. Habitats of the members of the genus are small streams in forests. The larvae are usually found on the surface of waterlogged wood bottom. The adults are considered to be riparian, and often collected from the surface of waterlogged wood bottom and in clusters of fallen leaves in the water. The larvae and adults probably feed on leaf litter and dead wood in the water, because many fragments of small plants are sometimes found in their alimentary canals (Fig. 2 D). The adults are not attracted to light traps. The stages of overwinter are both larvae and adults.

Remarks. According to the description by KODADA (1993 a), this genus is closely related to *Jaechomorphus* KODADA in the mouth parts and the venation of hind wings of an adult, but is easily distinguishable from it by the simply trilobed aedeagus.

The hind wing venation of the genus has already been described by KODADA (1993 b). MP₄ is usually simple, but sometimes secondarily bifid (Fig. 3 F).

Key to the Japanese Species of the Genus *Dryopomorphus*

(Adults)

1. Large species, TL 3.8–4.5 mm. Sublateral sulci of pronotum extending from base to basal 1/3. Maxillary palpi stout. Elytral intervals III, V and VII distinctly convex. Basal piece of aedeagus wide and short. Distribution: Honshu, Shikoku, Kyushu.
..... *D. extraneus* HINTON
- Small species, TL 2.8–3.6 mm. Sublateral sulci of pronotum extending from base to basal 1/6–1/2. Maxillary palpi slender. Elytral intervals III, V and VII slightly convex in middle to apical areas. Basal piece of aedeagus long. 2
2. Pronotum convex above, straightly narrowed anteriad from basal 1/3, the sublateral sulci extending from base to basal 1/2. TL 2.8–3.6 mm. Distribution: Honshu, Shikoku. *D. nakanei* NOMURA
- Pronotum strongly convex above, gradually narrowed anteriad, the sublateral sulci extending from base to basal 1/6–1/4. 3
3. Front angles of pronotum slightly projecting, the lateral margins gently arcuate, the sublateral sulci extending from base to basal 1/4. Elytral intervals slightly convex in basal area. Lateral lobe of aedeagus slender. TL 3.2–3.4 mm. Distribution: Amami-Ōshima. *D. amami* sp. nov.
- Front angles of pronotum projecting clearly, the lateral margins almost straight, the sublateral sulci extending from base to basal 1/6. Elytral intervals not convex in basal area. Lateral lobe of aedeagus somewhat stout. TL 3.2–3.3 mm. Distribu-

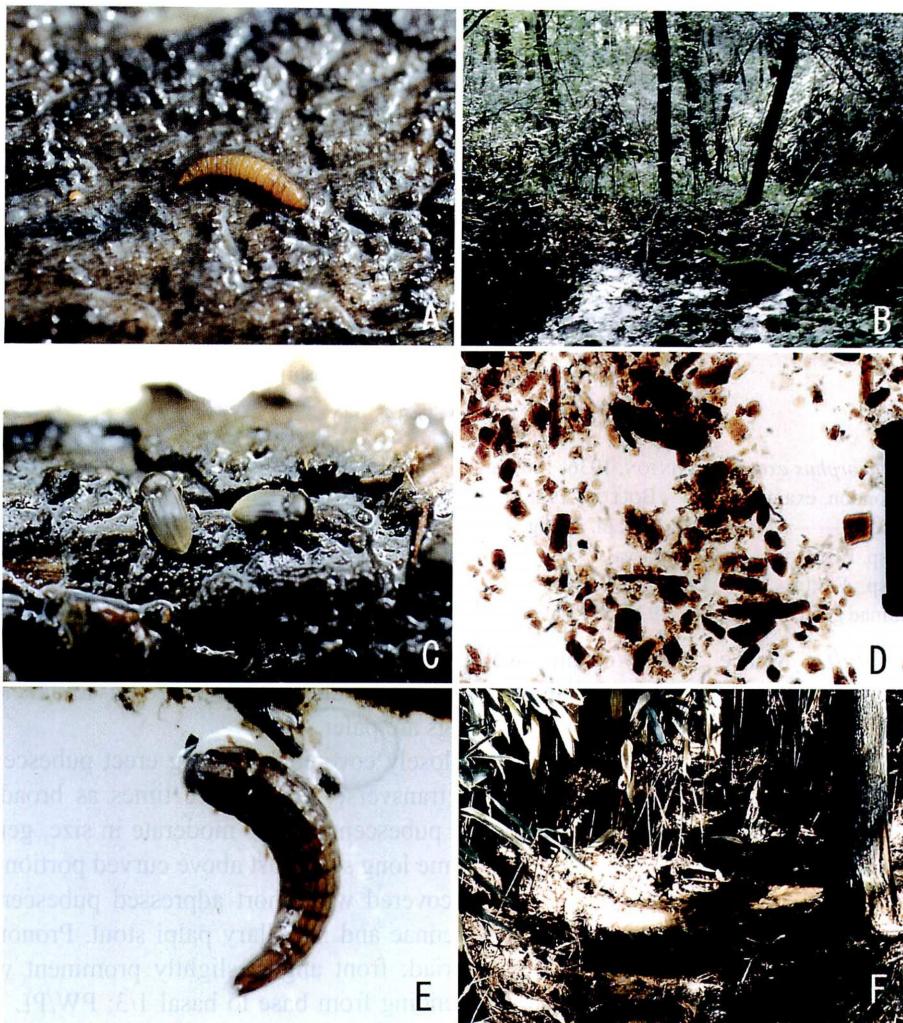


Fig. 2. Photographs of *Dryopomorphus* species. —— A–D: *Dryopomorphus extraneus* HINTON; A, larva; B, habitat; C, adults; D, plant sections in alimentary canals. —— E–F: *Dryopomorphus nakanei* NOMURA; E, larva; F, habitat.

tion: Yaku-shima, Tane-ga-shima. *D. yaku* sp. nov.

Key to the Japanese Species of the Genus *Dryopomorphus*

(Larvae)*

1. Head granulate on mesal part and along suture only. Lateral margins of thoraces and abdomens strongly serrate. Posterior margin of abdominal segment IX almost

- straight..... *D. amami* sp. nov.
- Head granulate widely in dorsal part. Lateral margins of thoraces and abdomens slightly serrate. Posterior margin of abdominal segment IX concave..... 2
2. Setae on antero-lateral corners of maxillae long and simple. Posterior margin of abdominal segment IX slightly concave..... *D. nakanei* NOMURA
- Setae on antero-lateral corners of maxillae somewhat short and pectinate. Posterior margin of abdominal segment IX deeply concave..... *D. extraneus* HINTON
- * The larva of *D. yaku* sp. nov. has not been obtained yet.

Dryopomorphus extraneus HINTON

[Japanese name: Hababiro-doromushi]

(Figs. 1 A, 2 A–D, 3–5, 11)

Dryopomorphus extraneus HINTON, 1936, 166, figs. 1–2 (Japan, preserved in the Natural History Museum, London, examined). — BOLLOW, 1938, 174. — SATŌ & GOTŌ, 1967, 70. — HINTON, 1971, 297 [key]. — SATŌ, 1985 a, 434, pl. 79, fig. 19. — SPANGLER, 1985, 420 [key].

Elmis sp. EB: GOSE, 1955, 12 [larva].

Elmis sp.: FUKUDA *et al.*, 1959, 457 [larva].

Helmiinae genus: BERTRAND, 1972, 539 [larva].

Adult. Male. Body oblong, well convex above, closely covered with easily removable silvery pubescence. Coloration of body dark reddish brown to blackish brown, but the antennae, mouth parts and legs are paler.

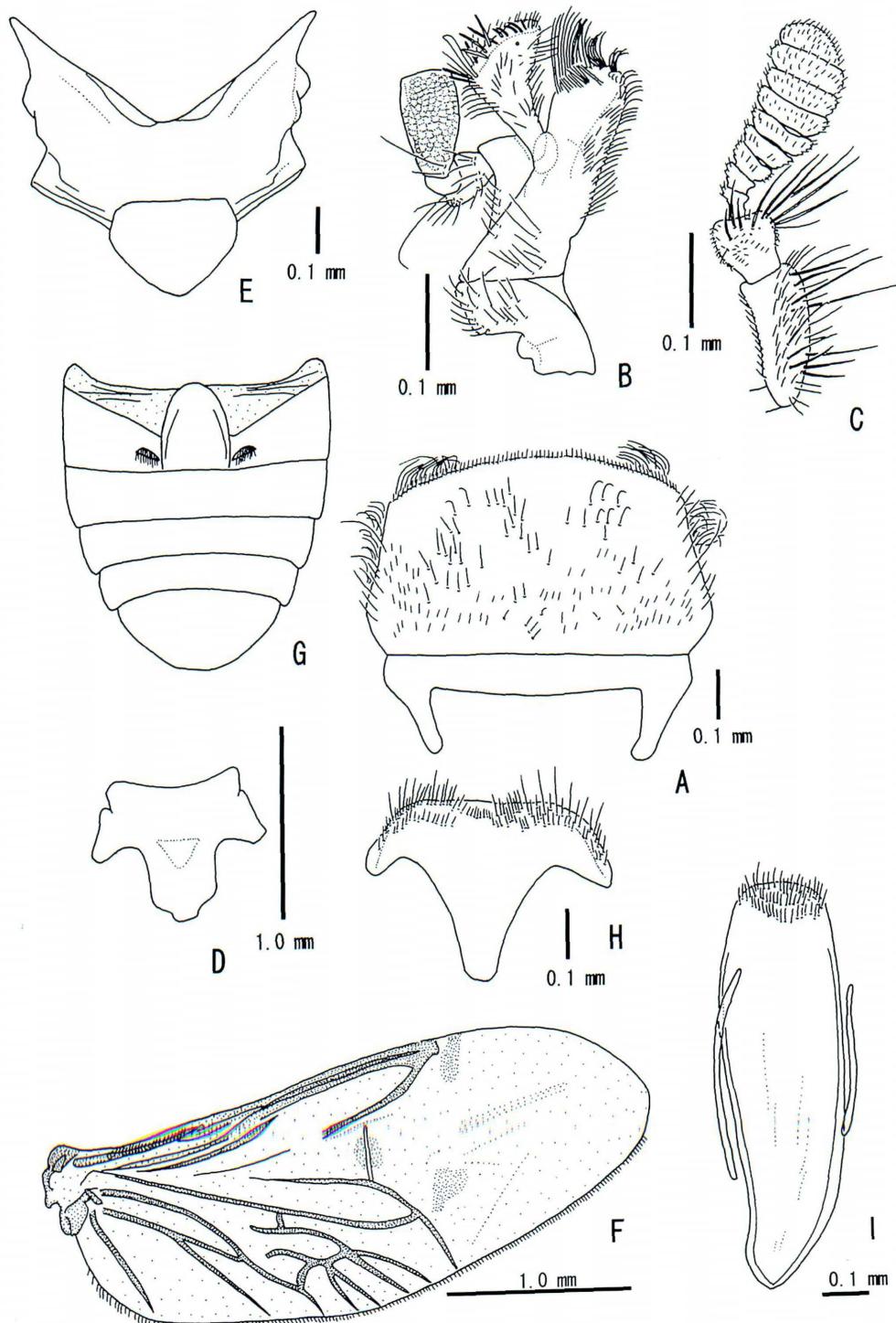
Head devoid of impression on disc, closely covered with long erect pubescence and short adpressed pubescence. Clypeus transverse, about three times as broad as length, densely covered with short suberect pubescence. Eyes moderate in size, gently prominent, covered with pubescence and some long setae just above curved portions to ventral sides. Labrum transverse, closely covered with short adpressed pubescence; front margin gently arcuate, glabrous. Antennae and maxillary palpi stout. Pronotum wider than long, gradually narrowed anteriad; front angles slightly prominent with evenly rounded apices; sublateral sulci extending from base to basal 1/3; PW/PL 1.4. Elytra oblong, distinctly convex in intervals III, V and VII; EL/EW 1.4–1.7 (1.5); EL/PL 2.2–2.5 (2.3); EW/PW 1.0–1.1 (1.1); TL/EW 2.1–2.3 (2.2).

Aedeagus about 0.9 mm; lateral lobe long and slender, tapered posteriad, with pointed apex; median lobe long and slender, pointed at apex; basal piece short and wide, the length about 3/5 times as long as that of median lobe.

Female. Sexual dimorphism indistinct; PW/PL 1.3–1.5 (1.4); EL/EW 1.4–1.6 (1.5); EL/PL 2.2–2.5 (2.3); EW/PW 1.1–1.2 (1.1); TL/EW 2.0–2.3 (2.2). Ovipositor relatively long; approximate ratio of stylus, coxite and baculus as 1.0 : 6.0 : 9.4.

Measurement. Male (n=6): TL 3.9–4.5 (4.20) mm; PW 1.7–2.0 (1.78) mm; PL

Fig. 3. *Dryopomorphus extraneus* HINTON. — A, Labrum; B, maxilla; C, antenna; D, prosternum; E, scutellum; F, hind wing; G, abdomen; H, sternite VIII; I, tergite VIII.



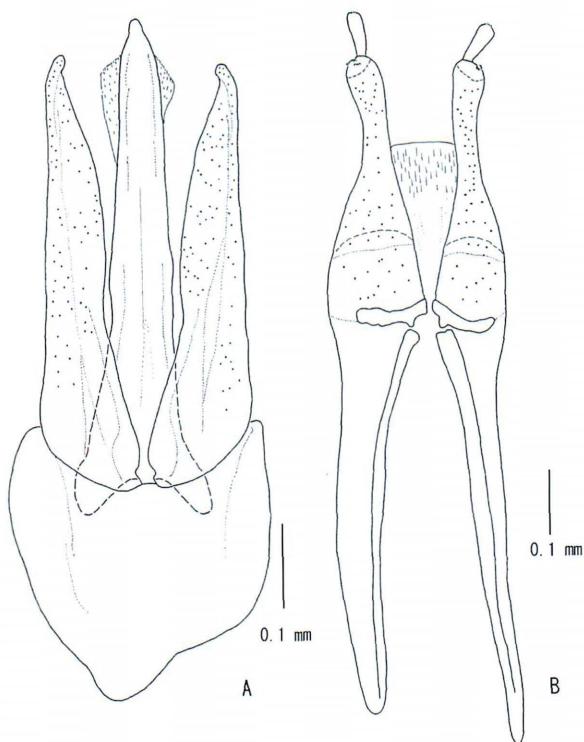
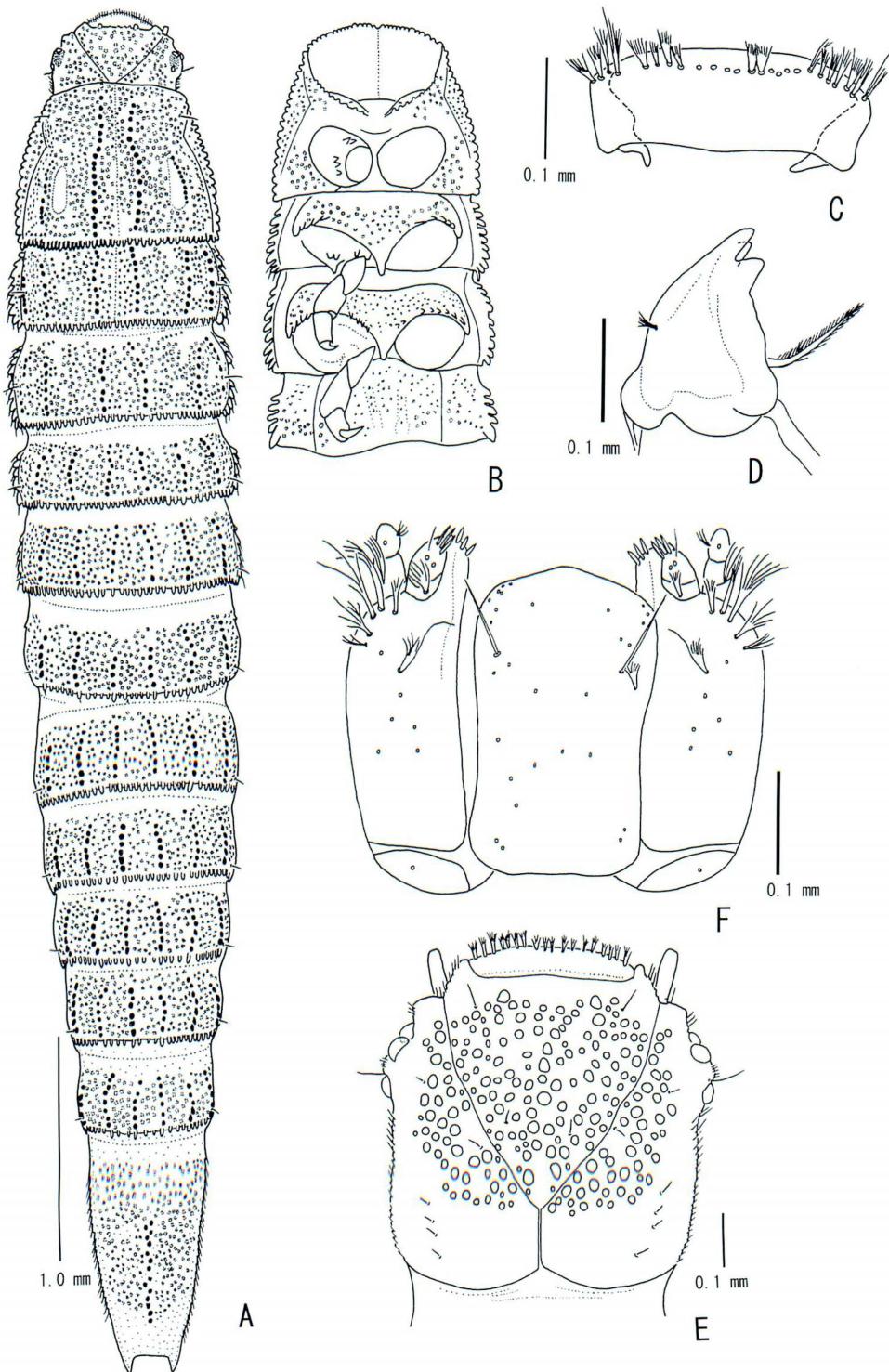


Fig. 4. *Dryopomorphus extraneus* HINTON. — A, Aedeagus; B, ovipositor.

1.2–1.4 (1.27) mm; EW 1.8–2.1 (1.93) mm; EL 2.7–3.1 (2.93) mm. Female (n=10): TL 3.8–4.3 (4.13) mm; PW 1.7–1.8 (1.77) mm; PL 1.1–1.3 (1.27) mm; EW 1.8–2.1 (1.92) mm; EL 2.7–3.0 (2.86) mm.

Specimens examined. Adults. [Honshu] <Nagano Pref.> 1 ex., Ichinose, 25–VIII–1958, M. SATÔ leg. <Aichi Pref.> 1 female, Mennoki-tôge, Inabu-chô, 10–IV–1995, H. YOSHITOMI leg.; 6 exs., ditto, 2–VI–1999, Y. UTSUNOMIYA leg. <Gifu Pref.> 2 exs., Toyama, Motosu-shi, 24–X–2004, Y. KAMITE leg.; 2 exs., Komami, Gujô-shi, 14–XI–2004, Y. KAMITE leg. <Wakayama Pref.> 3 males, 3 females & 1 ex., Kimi-tôge, 27–III–1961, M. GOSE leg. (male & female genit. s. nos. HY 435, 429); 1 male, 2 females & 1 ex., ditto, 28–VIII–1960, M. GOTÔ leg. <Osaka Pref.> 1 male, Mt. Kongô, 9–X–1966, M. GOTÔ leg.; 1 male, ditto, 3–IV–1966, M. GOTÔ leg. (genit. s. no. HY 438). <Hyôgo Pref.> 1 male & 1 female, Shinden Mine, Kamisasami, Taki-chô, 17–IX–1978, Y. NISHIKAWA leg. <Okayama Pref.> 8 exs., Kurami, Kamo-chô, 14–IX–2003, J. NAKAJIMA leg. [Shikoku] <Ehime Pref.> 1 male, Komenono, 9–V–

Fig. 5. *Dryopomorphus extraneus* HINTON, larva. — A, Habitus in dorsal aspect; B, prothorax to abdominal segment I in ventral aspect; C, labrum; D, mandible; E, head in dorsal aspect; F, maxilla and labium.



1976, Y. NOTSU leg.; 1 female, Kawabe-mura, 19-X-1976, M. SAKAI leg. <Tokushima Pref.> 1 ex., Shiotsuka-kōgen, Yamashiro-chō, 19-XII-2004, J. NAKAJIMA leg. [Kyushu] <Kumamoto Pref.> 1 male & 1 female, Nakayama, Kikuchi-shi, 27-III-1979, H. IRIE leg. (male genit. s. no. HY436). <Fukuoka Pref.> 3 exs., Kodokoro-san, Amagi-shi, 25-IV-2004, J. NAKAJIMA & K. OGATA leg. <Ōita Pref.> 10 exs., Omaedake, Maetsue-mura, 19-VII-2003, J. NAKAJIMA leg.; 5 exs., Tashiro, Maetsue-mura, 19-VII-2003, Y. KAMITE leg.

Larva. Body about 9.0 mm in fully expanded specimen. Head granulate widely in dorsal part. Lateral margin of thoraces and abdomen slightly serrate. Posterior margin of abdominal segment IX deeply concave. Setae on antero-lateral corners of maxillae somewhat short and pectinate.

Specimens examined. Larvae. 1 ex., Kodokoro-san, Amagi-shi, Fukuoka Pref., 25-IV-2004, K. OGATA leg.; 1 ex., Mennoki-tōge, Inabu-chō, Aichi Pref., 10-IV-1995, H. YOSHITOMI leg.

Distribution. Japan (Honshu, Shikoku, Kyushu).

Biological notes. This is comparatively a rare species in Honshu and Shikoku and is collected in small streams and rivers flowing under natural forests. Though the distributional areas of this species and *Dryopomorphus nakanei* NOMURA overlap each other, both the species are not collected at the same time. The microhabitat of the two species seems different.

Remarks. This species is remarkable in the body size, the shape of pronotum and male genitalia.

Dryopomorphus nakanei NOMURA

[Japanese name: Hime-hababiro-doromushi]

(Figs. 1B, 2E-F, 6-7, 11)

Dryopomorphus nakanei NOMURA, 1958, 45, pl. 1, fig. 4 (Noziri, Nagano Pref., preserved in NSMT, examined). — SATŌ & GOTŌ, 1967, 71. — HINTON, 1971, 295 [key]. — SATŌ, 1985a, 434, pl. 79, fig. 20; 1985b, 257, fig. 90. — SATŌ & YOSHITOMI, 2005, 637, fig. 116 [larva]. — SPANGLER, 1985, 420 [key].

Adult. Male. Body oblong-oval, well convex above, closely covered with easily removable silvery pubescence. Coloration of body dark reddish brown to blackish brown, but the antennae, mouth parts, abdominal sternites IV-V and legs are paler.

Head provided with a vague impression; anterior margin of clypeus and labrum almost straight. Maxillary palpi more or less slender, with last segment more than twice as long as wide. Antennae relatively slender; segments I-II elongate; III as wide; V-XI wider than long; total length of III-XI as long as I-II combined. Prono-front angles with feebly rounded apices; sublateral sulci extending from base to basal 1/2; PW/PL 1.4-1.7 (1.5). Elytra oblong, distinctly convex in basal part of intervals III, V and VII; EL/EW 1.3-1.4 (1.4); EL/PL 2.2-2.6 (2.4); EW/PW 1.1-1.3 (1.2); TL/EW

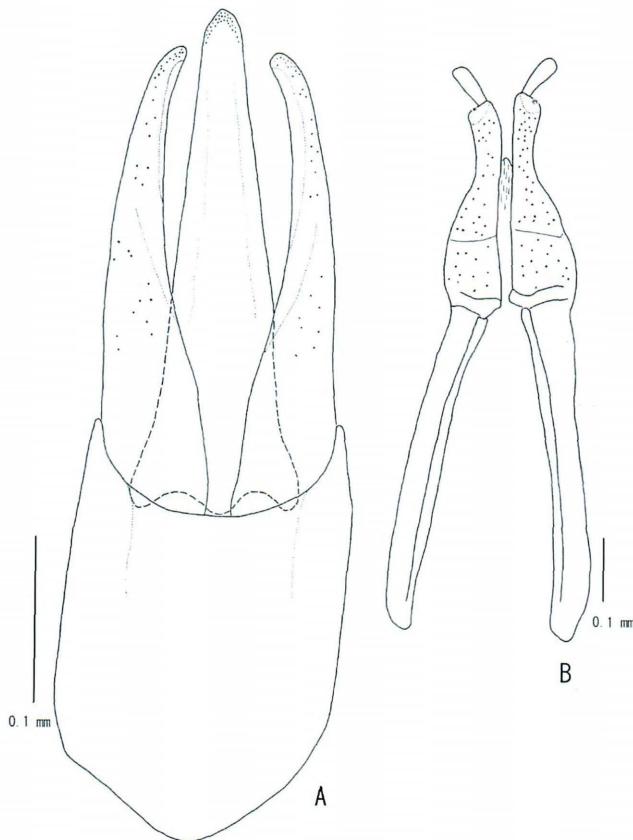


Fig. 6. *Dryopomorphus nakanei* NOMURA. —— A, Aedeagus; B, ovipositor.

1.8–2.0 (1.9).

Aedeagus about 0.5 mm; lateral lobe long and slender, gently tapered posteriad; apex of median lobe rounded; ventral piece somewhat long, the length about 4/5 times as long as that of median lobe.

Female. Sexual dimorphism indistinct; PW/PL 1.4–1.6 (1.5); EL/EW 1.3–1.4 (1.4); EL/PL 2.2–2.5 (2.3); EW/PW 1.1–1.2 (1.1); TL/EW 1.9–2.1 (2.0). Ovipositor short; approximate ratio of stylus, coxite and baculus as 1.0 : 5.0 : 8.2.

Measurement. Male (n=10): TL 2.8–3.4 (3.07) mm; PW 1.3–1.5 (1.38) mm; PL 0.8–1.0 (0.9) mm; EW 1.4–1.7 (1.59) mm; EL 2.0–2.4 (2.17) mm. Female (n=6): TL 2.8–3.6 (3.1) mm; PW 1.3–1.6 (1.37) mm; PL 0.8–1.1 (0.93) mm; EW 1.5–1.8 (1.57) mm; EL 2.0–2.5 (2.17) mm.

Specimens examined. Adults. [Honshu] <Niigata Pref.> 1 male, M-Echigo, 15-VI-1961, K. BABA leg. <Nagano Pref.> 1 ex., Odako, 26-VIII-1958, M. SATÔ leg. <Aichi Pref.> 1 male, Higashi-omi, Asuke-chô, 12-IX-1994, H. YOSHITOMI leg.; 1 male & 1 female, Okuiruka, VI-1979, M. SATÔ leg.; 2 females, Fujioka, 3-V-1983,

M. SATÔ leg. (genit. s. no. HY 439); 1 male, Toyota, 25-IV-1976, M. SATÔ leg.; 1 male, Odako, 25-VIII-1959, Z. NARUSE leg. (genit. s. no. HY 437); 1 female, Yagai Center, Inabu-chô, 29-IV-1968, M. SATÔ leg. <Gifu Pref.> 1 male, Oppara, 19-IV-1969, M. SATÔ leg.; 20 exs., Toyama, Motosu-shi, 24-X-2004, Y. KAMITE leg.; 5 exs., Hinata, Motosu-shi, 23-X-2004, Y. KAMITE leg.; 4 exs., Terabora, Hichiso-chô, 7-XI-2004, Y. KAMITE leg. <Mie Pref.> 2 males, Yunoyama, 16-VI-1957, Z. NARUSE leg.; 1 female & 1 ex., ditto, 6-V-1962, Z. NARUSE leg.; 2 males, Kukizaki, Owase-shi, 3-XI-1958, Z. NARUSE leg.; 1 female, Magose, Owase-shi, 20-XI-1958, Z. NARUSE leg.; 1 ex., ditto, 2-XI-1958, Z. NARUSE leg. <Wakayama Pref.> 1 ex., Kimi-tôge, 28-VIII-1960, M. GOTÔ leg.; 2 exs., ditto, 6-V-1962, M. GOTÔ leg. <Okayama Pref.> 3 exs., Kurami, Kamo-chô, 14-IX-2003, J. NAKAJIMA leg. <Hyôgo Pref.> 2 exs., Onzui-keikoku, Haga-chô, 2-V-1994, M. MORI leg. [Shikoku] <Kôchi Pref.> 25 exs., Kuroson, Nishitosa-mura, 19-VI-2002, Y. KAMITE leg.

Larva. Body about 8.0 mm in fully expanded specimen. Head granulate widely in dorsal part. Lateral margin of thoraces and abdomen slightly serrate. Setae on antero-lateral corners of maxillae long and simple. Abdominal segment IX slightly concave in posterior margin.

Specimens examined. Larvae. 2 mature larvae, Sawanodô, Asuke-chô, Aichi Pref., 13-XI-1998, H. YOSHITOMI & A. SHIRAGANE leg.; 2 mature larvae, Tsukuba-san, Ibaraki Pref., 22-XI-1998, H. YOSHITOMI leg.

Distribution. Japan (Honshu, Shikoku).

Biological notes. This species inhabits small rivers or streams, and waterfalls running under forests. This is a common species in artificial forests of the Japanese cedar in Kantô District, but it is rather rare in other areas.

Remarks. This species is easily distinguishable from *Dryopomorphus extraneus* HINTON by the body size and the shape of pronotum and male genitalia in an adult, and by the posterior margin of the abdominal segment IX convex slightly in the larva.

Dryopomorphus amami YOSHITOMI et SATÔ, sp. nov.

[Japanese name: Amami-hababiro-doromushi]

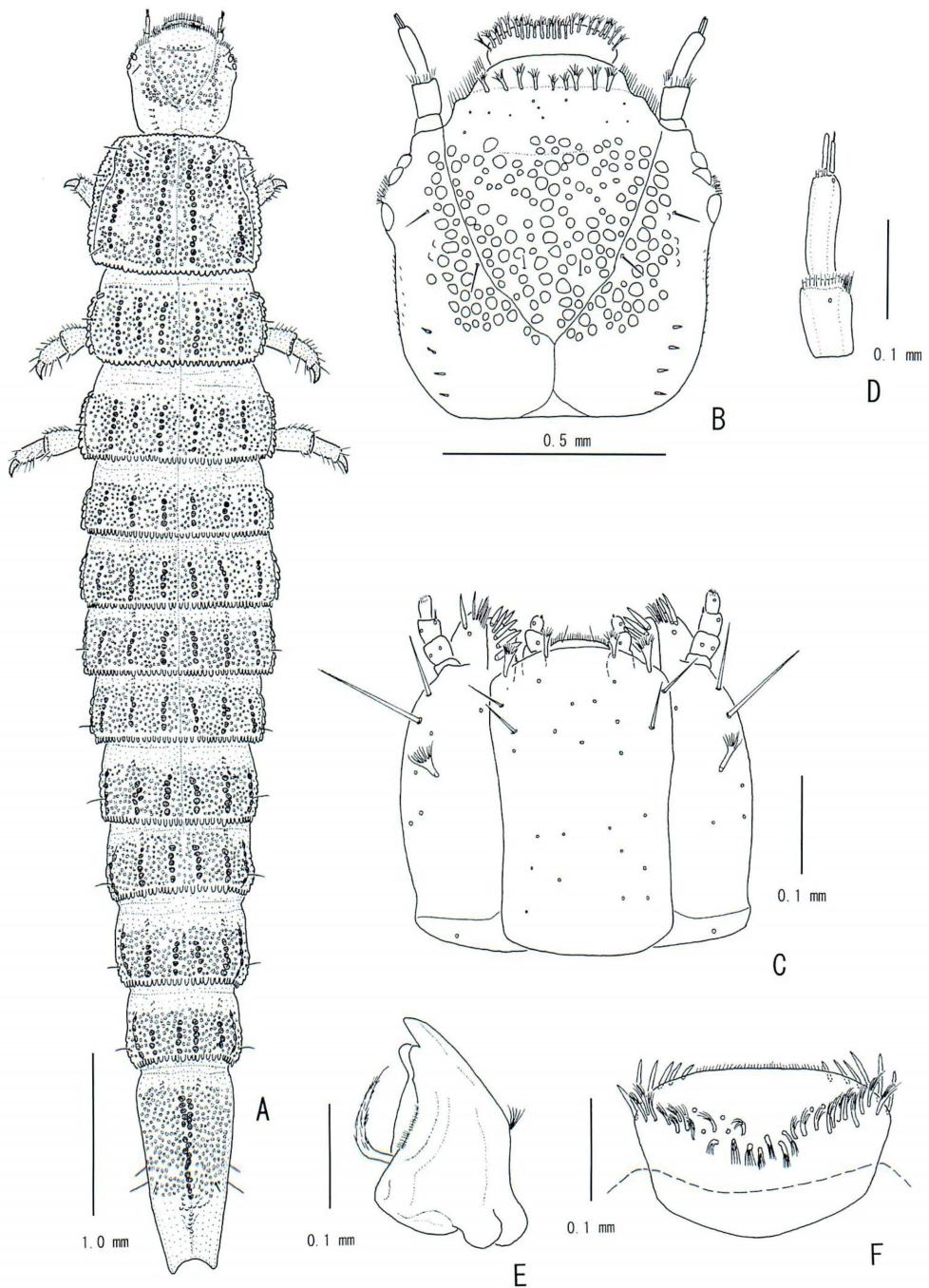
(Figs. 1C, 8-9, 11)

Adult. Male. Similar to *Dryopomorphus nakanei* in general appearance; pronotum strongly convex above, gently arcuate in lateral margins, with front angles slightly projecting, the sublateral sulci extending from base to basal 1/4; PW/PL 1.5; EL/EW 1.4; EL/PL 2.1; EW/PW 1.0; TL/EW 2.0.

Aedeagus about 0.5 mm, similar to that of *D. nakanei*, but the median lobe is somewhat slender.

Female. PW/PL 1.5-1.6 (1.5); EL/EW 1.4; EL/PL 2.2-2.3 (2.3); EW/PW 1.1;

Fig. 7. *Dryopomorphus nakanei* NOMURA, larva. —— A, Habitus in dorsal aspect; B, head in dorsal aspect; C, maxilla and labium; D, antenna; E, mandible; F, labrum.



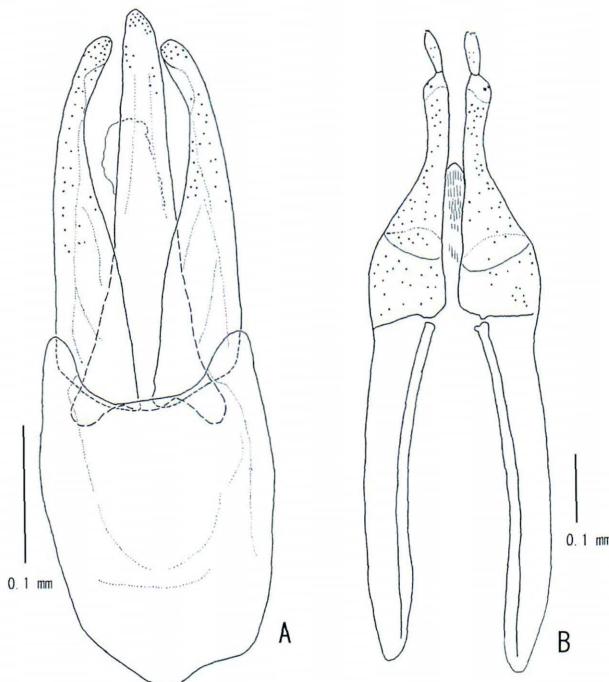


Fig. 8. *Dryopomorphus amami* sp. nov. — A, Aedeagus; B, ovipositor.

TL/EW 2.0. Ovipositor short; approximate ratio of stylus, coxite and baculus as 1.0 : 5.4 : 7.8.

Measurement. Male (n=3): TL 3.4 (3.40) mm; PW 1.6–1.7 (1.63) mm; PL 1.1 (1.10) mm; EW 1.7 (1.70) mm; EL 2.3 (2.30) mm. Female (n=3): TL 3.2–3.3 (3.27) mm; PW 1.5–1.6 (1.53) mm; PL 1.0 (1.00) mm; EW 1.6–1.7 (1.63) mm; EL 2.2–2.3 (2.27) mm.

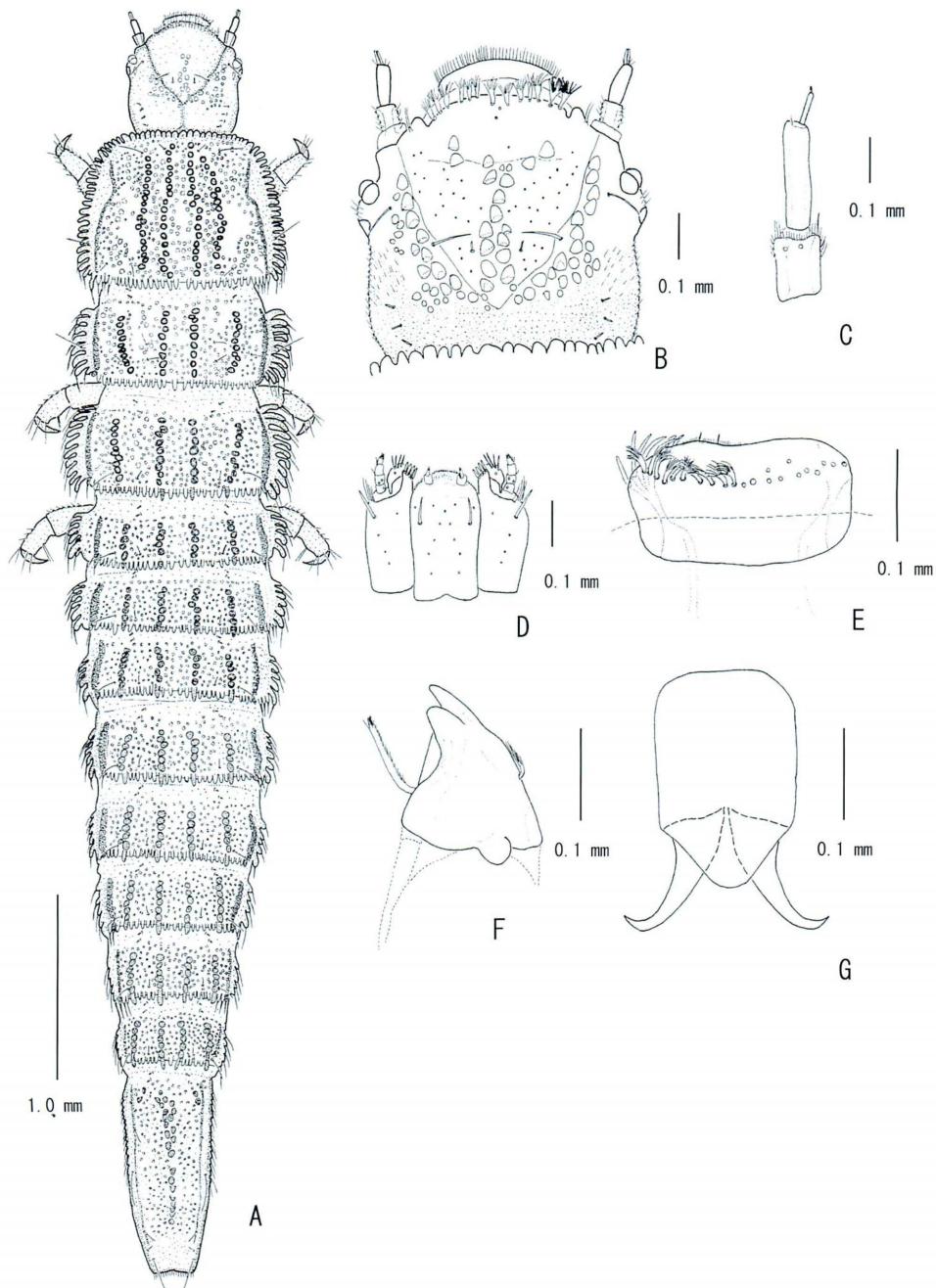
Type series. Holotype (EUM): 1 male, Kinsakubaru, Amami-Ōshima, 23–III–1997, M. SATÔ leg. Paratypes (EUM, NSMT, NMW, NMNS): 2 males & 1 female, same data as for the holotype; 2 females, same locality as for the holotype, 26–III–1997, H. YOSHITOMI leg.

Larva. Body about 7.0 mm in fully expanded specimen. Head as long as wide, granulate in mesal part and along suture only. Lateral margin of thoraces and abdomen strongly serrate. Posterior margin of abdominal segment IX almost straight.

Specimens examined. Larvae. 2 exs., Kinsakubaru, Amami-Ōshima, 26–III–1997, H. YOSHITOMI leg.

Distribution. Japan (Amami-Ōshima).

Fig. 9. *Dryopomorphus amami* sp. nov., larva. — A, Habitus in dorsal aspect; B, head in dorsal aspect; C, maxilla and labium; D, antenna; E, labrum; F, mandible; G, operculum and opercular hooks.



Biological notes. The type locality is a small stream flowing in a natural forest. In the same stream, *Nomuraelmis amamiensis* SATÔ, *Zaitzevia elongata* NOMURA, *Stenelmis hisamatsui* SATÔ (Elmidae) and *Hydrocassis jengi* SATÔ (Hydrophilidae) were collected. The type series was collected on the surface of waterlogged wood and in a cluster of fallen leaves.

Remarks. This species is related to *Dryopomorphus nakanei* NOMURA in general characters, but differs from it by the shape of pronotum and elytron.

Etymology. Named after the type locality.

***Dryopomorphus yaku* YOSHITOMI et SATÔ, sp. nov.**

[Japanese name: Yaku-hababiro-doromushi]

(Figs. 1D, 10–11)

Adult. Male. Similar to *D. nakanei* and *D. amami* sp. nov. in general appearance; pronotum strongly convex above, straightly narrowed anteriad, with front angles as in *D. nakanei*, the sublateral sulci extending from base to basal 1/6; elytral intervals indistinct, not convex; PW/PL 1.5; EL/EW 1.3; EL/PL 2.0; EW/PW 1.1; TL/EW 1.9.

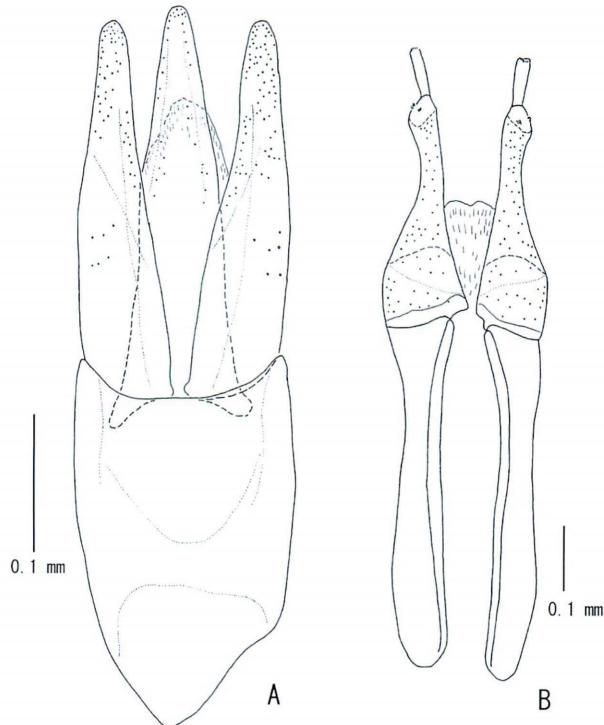


Fig. 10. *Dryopomorphus yaku* sp. nov. —— A, Aedeagus; B, ovipositor.

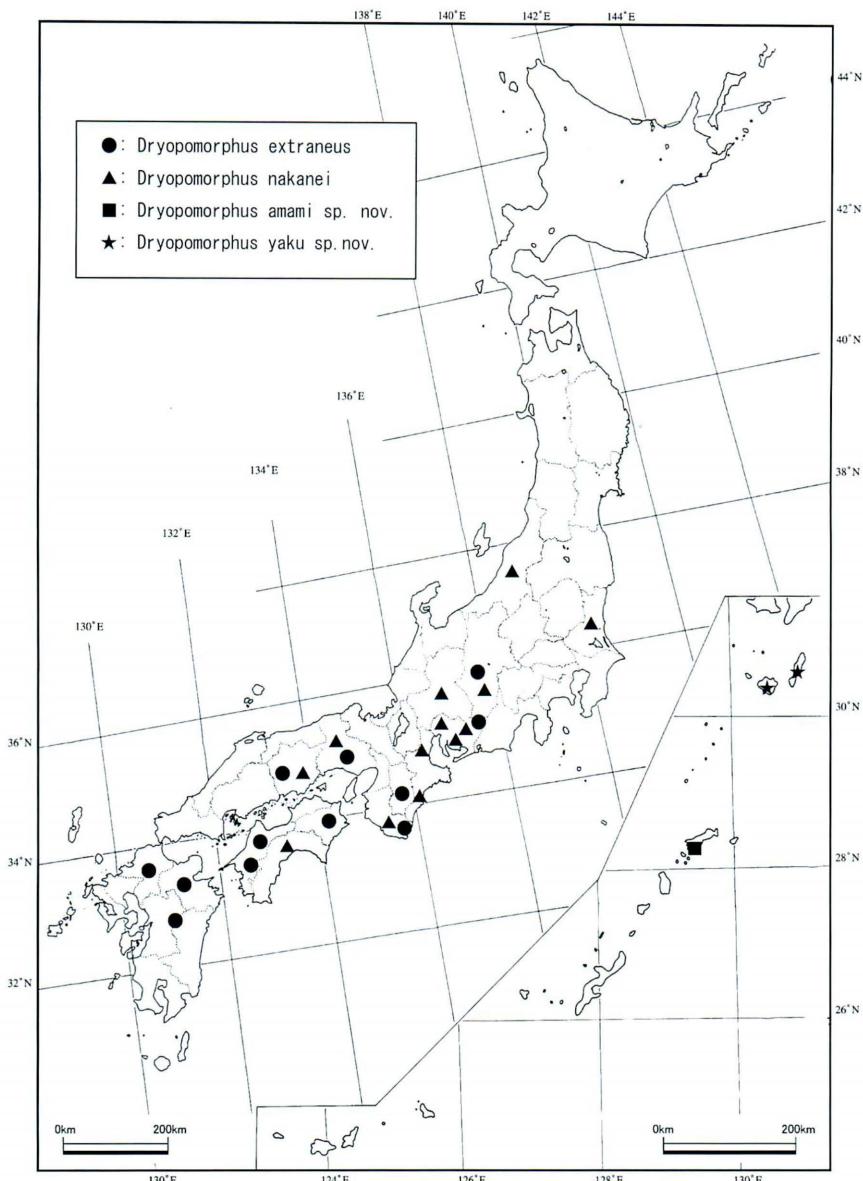


Fig. 11. Sketch map showing distribution of the Japanese *Dryopomorphus* species.

Aedeagus about 0.5 mm; lateral lobe stout, with rounded apex; median lobe stout, tapering slightly posteriad, with rounded apex; ventral piece somewhat long, the length about 4/5 times as long as that of median lobe.

Female. PW/PL 1.5–1.6 (1.6); EL/EW 1.3–1.4 (1.3); EL/PL 2.2–2.3 (2.2);

EW/PW 1.1; TL/EW 1.9. Ovipositor short; approximate ratio of stylus, coxite and baculus as 1.0 : 5.0 : 8.1.

Measurement. Male (n=1): TL 3.3 mm; PW 1.6 mm; PL 1.1 mm; EW 1.7 mm; EL 2.2 mm. Female (n=3): TL 3.2–3.3 (3.23) mm; PW 1.5–1.6 (1.57) mm; PL 1.0 (1.00) mm; EW 1.7 (1.70) mm; EL 2.2–2.3 (2.33) mm.

Type series. Holotype (EUM): 1 male, north of Kurio, Yaku-shima, Kagoshima Pref., 18–VII–1997, H. YOSHITOMI leg. Paratypes (EUM, NSMT, NMW): 3 females, same data as for the holotype.

Additional material examined. 1 Female, Kuhama-gawa, Nakano, Tane-ga-shima, Kagoshima Pref., 28–VII–2005, T. OGATA leg.

Distribution. Japan (Yaku-shima, Tane-ga-shima).

Biological notes. Biological information is very scarce. The type locality is a small water-fall, and the type series was collected on the surface of waterlogged wood.

Remarks. This is a very remarkable species in the shape of pronotum, but is closely related to *D. amami* sp. nov.

Etymology. Named after the type locality.

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要 約

吉富博之・佐藤正孝：日本産ハバビロドロムシ属の再検討。——日本からは2種が知られていたハバビロドロムシ属 *Dryopomorphus* HINTON の分類学的再検討を行い、成虫および幼虫の記載を行なった。既知種であるハバビロドロムシ *D. extraneus* HINTON およびヒメハバビロドロムシ *D. nakanei* NOMURA のほかに、新種として奄美大島からアマミハバビロドロムシ *D. amami* sp. nov. および屋久島と種子島からヤクハバビロドロムシ *D. yaku* sp. nov. の2種を記載し、日本から4種が確認された。ハバビロドロムシ、ヒメハバビロドロムシおよびアマミハバビロドロムシについては幼虫も記載した。

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